

**ABSTRACT**

A method and apparatus for designing and editing a distribution system for a building is disclosed. Elements of such distribution systems and requirements of relevant standard, are stored in a computer's memory. Building parameters are entered into a computer manually. The user identify the standard to be followed and the element to be optimized. The system divides the building into sections as appropriate to the user identified standard. The system then computes layout needed to comply with the selected standard. The layout is routed and sized to avoid building structural members, yet the elements of the layout are optimized for size and length. The apparatus prints out a hard copy of the design layout which can include an elements listing needed to complete the system. The design layout as well as the building parameters can be edited. The edited layout is checked for compliance with the identified standard as well as avoidance of building parameters.